CLMPTO

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Claims 1- 9 have been amended

1. (Amended) A method for rendering a substrate surface containing a channel with a depth < 1000μm intended to form a liquid transportation system and being made in plastic material more hydrophilic comprising:

treating the surface with a gas plasma of a non-polymerizable gas, wherein the intensity of the plasma is selected so that the surface becomes permanently more hydrophilic.

2. (Amended) The method according to claim 1, wherein the plasma intensity is ≥ 5 W/cm^3/min.

3. (Amended) The method according to claim 2, wherein a power of > 250 W and a gas flow of < 50 cm^3/min are applied to create the plasma.

4. (Amended) The method of claim 1, wherein the plastic material comprises an immediate water-contact angle > 20° and the plasma treatment conditions are set so that the immediate water-conduct angle after plasma treatment and a subsequent wash with pure water/ethanol becomes < 30°.

5. (Amended) The method of claim 1, wherein the plastic material is a polymer comprising unsaturated monomer(s) or condensation polymer(s), wherein said condensation polymer(s) comprises monomer(s) having two or more groups selected from the group consisting of amino groups, hydroxy groups and carboxy groups.

6. (Amended) The method of claim 1, wherein the plasma is induced by radiowaves, microwaves, or a combination thereof.

7. (Amended) The method of claim 1, wherein the plasma gas is selected from the group consisting of oxygen, nitrogen, noble gas, or a mixture thereof.

8. (Amended) The method of claim 1, wherein subsequent to the treating step, the surface of the substrate is derivatized to exhibit anion exchanging groups, cation exchanging groups, amphoteric groups, hydroxy groups, bioaffinity groups, or chelating groups.

Claim 9 has been canceled

Claims 10 – 13 has been amended

10. (Amended) A substrate surface, which is made of a plastic material, which has been plasma treated, comprising a surface in uncoated form having an immediate water-contact angle of < 30°, wherein said water-contact angle is changed less than + 20% and/or less than + 5° upon washing with a pure ethanol/water mixture.

11. (Amended) The substrate of claim 10, wherein the plastic material is a polymer comprising unsaturated monomer(s) or condensation polymer(s), wherein said condensation polymer(s) comprises monomer(s) having two or more groups selected from the group consisting of amino groups, hydroxy groups and carboxy groups.

12. (Amended) The substrate of claim 10, wherein the surface before having been gas plasma treated exhibits an immediate water-contact angle > 30°.

13. (Amended) The substrate of claim 10, wherein at least part of the surface comprises a liquid transportation system comprising a channel which has a depth < 1000 µm.

Claim 14 has been canceled

Claims 15 – 22 has been amended

15. (Amended) A kit comprising

a microfabricated device comprising a substrate surface which is made in a plastic material and which comprises a liquid transportation system comprising a channel which has a depth < 1000 µm, and

a fluorescent substance to be detected in the device, the fluorescence intensity of the plastic material being < 50 % of the fluorescent intensity of the substance at the wavelength at which substance fluoresces.

16. (Amended) The kit of claim 15, wherein the plastic comprises a polymerisation product obtained by polymerisation of an aliphatic monomer in which there is polymerisable unsaturation.

17. (Amended) A method for culturing anchorage-dependent cells and non-anchorage dependent cells that in a part of their life cycle require attachment to a substrate surface comprising performing the culturing of the cells in contact with a substrate surface which is made of a plastic material and has with an immediate water-contact angle of < 30°.

18. (Amended) The method of claim 17, wherein the substrate surface having an immediate contact angle of ≤ 30° has been obtained by the gas plasma treatment method defined in claim 1.

19. (Amended) The method of 17, the substrate surface enables at least 30 % of the plated anchorage dependent cells to adhere to the substrate surface.

20. (Amended) The method of claim 17, wherein at most 15 % of the culture medium is serum.

21. (Amended) The method of claim 17, wherein culturing is taking place during a time period permitting the number of cells to be at least duplicated.

22. (Amended) The method claim 17, wherein the cell culturing is carried out in a chamber of a microfabricated device in which there is a liquid transportation system comprising a channel having a depth which is < 1000 μm and a chamber which provides said substrate surface.

23. The method according to claim 1 further comprising the step of washing the surface subsequently with a pure solvent selected from the group consisting of water, a water-miscible solvent and mixtures thereof.

24. The method according to claim 5, wherein said polymer is a copolymer.

25. The method according to claim 5, wherein said unsaturated monomer(s) is an alkene/alkadiene or a vinyl aryl compound.

26. The method according to claim 25, wherein said alkene/alkadiene is selected from the group consisting of acids, esters, amides, and nitriles containing one or more alkene groups.

27. The substrate of claim 10, wherein said polymer is a copolymer.

28. The substrate of claim 11, wherein said unsaturated monomer(s) is an alkene/alkadiene or vinyl aryl compounds.

29. The substrate of claim 28, wherein said alkene/alkadiene is selected from the group consisting of acids, esters, amides, and nitriles containing one or more alkene groups.

30. The substrate of claim 11, wherein said polymer is cross-linked.

31. The substrate of claim 11, wherein said polymer is a mixture of two or more polymers or copolymers.